

WHAT IS CLAIMED IS:

1. A method of simultaneously applying a pre-selected dye image to multiple surfaces of a three dimensional object, comprising the steps of:

a) providing a three dimensional object having an outer plastic surface for receiving a dye image, said three dimensional object having a top surface and a plurality of side surfaces adjacent to and not co-planar with said top surface;

b) placing a flexible dye image carrier sheet in registration over said three dimensional object, said carrier sheet comprising a film substrate comprising an ionomer copolymer of: i) α -olefins of the formula $R-CH=CH_2$, wherein R is a hydrogen atom or an alkyl radical having 1 to 8 carbon atoms, ii) α,β -ethylenically unsaturated carboxylic acids having 3 to 8 carbon atoms, and iii) optionally an additional monoethylenically unsaturated comonomer compound, wherein 10% to 90% of the carboxylic acid functional groups are ionized by neutralization via metallic ions distributed over the copolymer, wherein said film substrate has a dye-receptive layer coated thereon, and said dye-receptive layer has a pre-selected dye image printed thereon;

c) lowering a flexible membrane over said three dimensional object and said image carrier sheet;

d) establishing a vacuum under said membrane to cause said image carrier sheet to conform into pressurized communication with said top surface and said side surfaces of said three dimensional object; and

e) heating said membrane and said dye image carrier sheet to cause said dye image to transfer from said image carrier sheet onto said top surface and said side surfaces of said three dimensional object.

2. The method of claim 1, wherein the film substrate further comprises an intermediate barrier layer, the barrier layer being interposed between the dye-receptive layer and film substrate.
3. The method of claim 1, wherein the dye-receptive layer comprises a polymeric film-forming binder and pigment.
4. The method of claim 1, wherein the flexible membrane comprises silicone rubber.
5. The method of claim 1, wherein a heating element emits heat radiation in the infrared range to heat the membrane and image carrier sheet.
6. The method of claim 5, further comprising the step of providing a plurality of heat reflectors to reflect the emitted heat radiation to the membrane and image carrier sheet.
7. The method of claim 1, further comprising the step of pre-heating the image carrier sheet either before or after the step of lowering the flexible membrane and prior to the step of establishing a vacuum.